

REMARKS

Favorable reconsideration of the above-identified application is requested in view of the following remarks.

The Examiner is thanked for indicating that Claims 7-9 and 12 define allowable subject matter. Accordingly, Claims 7 and 12 are rewritten in independent form and Claims 10 and 11 are amended to depend from Claim 7. Therefore, as acknowledged in the Official Action, Claims 7 and 12 are allowable and Claim 8-11 are allowable at least by virtue of their dependence from Claim 7.

Claims 1-6 are the only claims presently at issue and are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,417,053, hereinafter *Uji*, in view of U.S. Patent No. 5,329,758, hereinafter *Urbach*. Claims 1, 10 and 11 are rejected under 35 U.S.C. § 103(a) as being unpatentable over *Uji* in view of *Urbach*, and further in view of Design Choice.

As a preliminary matter, it is pointed out that Claim 1 (original) was not previously rejected over *Uji* in view of *Urbach* and further in view of Design Choice, and that this is a new grounds of rejection that was first presented in the most recent final Official Action. Therefore, the finality of that Official Action is improper because it contains rejections based on new grounds that were not necessitated by amendment. It is therefore requested that the finality of the most recent Official Action be withdrawn.

Rejection over *Uji* in view of *Urbach*

Claim 1 defines a gas turbine set, with a cooling air system through which at least one cooling air mass flow flows from a compressor to thermally highly loaded

components of the gas turbine set. Means for increasing the pressure of flowing cooling air are arranged in a cooling air duct of the cooling air system. The means for increasing the pressure are ejectors operable with a working fluid. The working fluid mass flow is less than 20% of a driven air mass flow.

Uji discloses a partial regenerative dual fluid cycle gas turbine assembly. A detailed description of *Uji* was presented in the previous Response and is therefore not repeated. The Official Action relies on *Uji* for a disclosure of every feature of Claim 1, except for the claim recitation relating to the working fluid mass flow being less than 20% of a driven mass flow, and relies on *Urbach* for such a disclosure.

The Official Action relies on *Urbach*'s discussion of prior art for a disclosure of a working fluid mass flow that is less than 20% of a driven cooling mass flow. However, the portion of *Urbach* identified in the Official Action, column 3, lines 21-28, states that "some commercial versions of steam augmented gas turbines accept steam in amounts up to 16% of the compressor air flow..." (emphasis added). To make the rejection, the Official Action assumes that a compressor air flow of the prior art is equivalent to a cooling air mass flow as claimed and cites a portion of the present application that discusses a scenario where the compressor air flow serves as a cooling mass flow. However, often times, less than all of the compressor air flow is used as a cooling air mass flow, so it is not an accurate interpretation to say that the mass of a compressor air flow is equivalent to a mass of a cooling mass flow. The disclosure in *Urbach* does not seem to disclose that all the entire mass of the compressor air flow is equivalent to the mass that is used as a cooling mass flow. Therefore, the disclosure in *Urbach* that the turbines accept up to 16% of the compressor air flow does not disclose to one skilled in the art that the ratio of steam

to the cooling air flow used to cool thermally highly loaded components of a gas turbine set is less than 20%.

Further, regarding the invention of *Urbach*, column 9, lines 39-40 of *Urbach* describes that "the percentage of water (i.e., with respect to air) injected into the combustor will be about 47.5%". Thus, *Urbach's* employed ratio seems to be much different than that claimed, thereby teaching away from the claimed subject matter.

For at least those reasons, the disclosure in *Urbach* would not have directed a skilled person to arrive at the claimed subject matter including a working fluid mass flow that is less than 20% of a driven cooling air mass flow as recited in Claim 1.

Claims 2-6 are allowable at least by virtue of their dependence from Claim 1, and also because they define features that distinguish over the cited disclosures.

Rejections over *Uji* in view of *Urbach* and Design Choice

Claims 1, 10 and 11 are rejected under 35 U.S.C. § 103(a) as being unpatentable over *Uji* in view of *Urbach*, and further in view of Design Choice.

Claims 10 and 11 are amended to depend from allowable Claim 7 and are therefore allowable for at least the same reasons.

The Official Action proposes that it would have been an obvious matter of design choice to have a working fluid be less than 20% of the driven mass flow, as defined by Claim 1, because such does not present a novel or unexpected result. Contrary to the position set forth in the Official Action, it is again pointed out that by employing working fluid that is less than 20% of the driven mass, the cooling system designed for air cooling is not overduely charged with steam, thereby producing a positive unexpected result. That cannot be ignored. Also, as noted above, the

claimed ratios are much different than the ratios disclosed in connection with *Urbach's* invention, e.g., 47.5%, thereby making the proposed modification non-obvious.

Conclusion

For at least the foregoing reasons, it is requested that all the rejections be withdrawn and that this application be allowed in a timely manner.

Should any questions arise in connection with this application, or should the Examiner believe a telephone conference would be helpful in resolving any remaining issues pertaining to this application, the undersigned respectfully requests that he be contacted at the number indicated below.

Respectfully submitted,

BURNS, DOANE, SWECKER & MATHIS, L.L.P.

Date: October 20, 2005

By: Kevin Brayton McGoff

Kevin Brayton McGoff
Registration No. 53,297

P.O. Box 1404
Alexandria, Virginia 22313-1404
(703) 836-6620